

# **Mineral Industry Surveys**

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## PRECIOUS METALS IN APRIL 2000

U.S. mines produced 26,200 kilograms (kg) of gold and 165,000 kg of silver in April 2000. Compared with March, production of silver was down 19% in Nevada.

#### Gold

**Domestic.**— A bill (H.R. 4170) has been introduced in the U.S. House of Representatives that would provide capital gains treatment enjoyed by stock and bond investors for gold, silver, and platinum billion investment products in coin and bar form. Bullion coins are legal tender that depend on the metal content and the day-to-day price changes of the metal. Some popular bullion coins include the American Eagle, the Australian Kangaroo Nugget, the Canadian Maple Leaf, the South African Krugerrand, and the Austrian Philharmonic. Bullion bars, measured in troy ounces or grams, come in a wide range of sizes (American Metal Market, 2000a).

International.—The International Monetary Fund (IMF) has completed its planned sales of over 400,000 kg (13 million troy ounces) of gold by reevaluating the gold without depressing the gold market. Seven off-market transactions were made with the borrowing countries, Brazil and Mexico, selling the gold, buying it back, and raising cash by reevaluating the gold. The off-market transactions were part of an agreement to fund the IMF's share of the "Highly Indebted Poor Countries" (HIPC) initiative. IMF sold its gold to Brazil and Mexico and accepted it back immediately from Brazil and Mexico for payment of an obligation due that same day. IMF takes advantage of the difference between the value of gold on its books and the much higher market price. The cash is then invested and the interest is used to support the HIPC initiative (American Metal Market, 2000c).

Saudi Arabian Mining (Maaden) started mining operations at its Al Hajar gold mine in southern Saudi Arabia. The mine, which is located in the Asir region, 350 kilometers southeast of Jeddah, has

an annual production capacity of over 1,700 kg (55,000 troy ounces) of gold and more than 7,300 kg (235,000 troy ounces) of silver. Cash costs are estimated at less than \$120 per ounce of gold (Platt's Metal Week, 2000b).

*Update.*—The Indonesian Supreme Court overruled a district court in North Sulawesi that had ordered the closure of the Minahasa Gold Mine in Ratatok. Newmont Mining Co. had been issued an order from the district court in Tondano on April 8 to shut down the gold mine by April 16. The closure order relates to a claim by the regional government that taxes (\$2.2 million) are owed on overburden removed during the mining operation. Newmont will pay the local authorities \$500,000 in taxes and interest, but this payment is in line with its contract with the government (Metal Bulletin, 2000a). The Minahasa Gold Mine produced 10,700 kg (344,000 ounces) of gold in 1999 at a cash operating cost of \$103 per troy ounce of gold. Last year the mine began operating Indonesia's first heap-leach pad (Platt's Metals Week, 2000a).

The Swiss National Bank (SNB) will begin its gold sales in May. The quantity of gold initially offered, method of offering, and the time frame that the bank will follow has not been decided. The Swiss public has approved lowering the country's gold-currency ratio from 40% to 25%, which would involve gold sales. Reevaluation of gold reserves could result in about 1.3 million kg of gold deemed to be in excess (Platt's Metals Week, 2000c). Initially, the SNB will sell 120,000 kg of gold by the end of September, 2000, which is in line with the Washington Agreement signed by 15 European banks in September 1999 (Metal Bulletin, 2000c). The joint-ventures partners Placer Dome Inc. and Western Areas have agreed with the National Union of Mine workers to reemploy hundreds of gold mine workers laid off last September. Continuous mining will not be implemented immediately; it will be introduced on an incremental basis (Platt's Metals Week, 2000e).

Harmony Gold Mining Co. Ltd., Randfontein, South Africa, teamed up with bullion merchant Baird & Co. Ltd., London. They have begun selling their own branded gold bar through an internet site. The 3.746-ounce gold bar is 99.9% pure. South African law classifies the gold bar as unwrought precious metal, which prevents sales in South Africa (American Metal Market, 2000b).

#### Silver

Pan American Silver Corp. has updated the resource estimate for its La Colorada silver project in Zacatecas State, Mexico. The estimate is now put at 6.72 million metric tons of ore at a grade of 419 grams per ton (g/t) silver, 0.31 g/t gold, 1.73% zinc, and 1.04% lead. The tonnage is over twice the previous estimate, and measured and indicated resources are reportedly 130% higher than before. Pan American attributes the substantial increase in resources to a wide mineralized zone discovered during recent underground development. The zone, intersected by 21 drill-holes and three cross-cuts, is open in three directions and averages 13 meters in width with a weighted average grade of 400 g/t silver. The new mineralization is predominately oxide in nature. A feasibility study by Pan American is scheduled to be completed by the end of April. Construction could begin as early as September 2000, with production in the second half of 2001 (Mining Journal, 2000a).

#### **Platinum-Group Metals**

The pace of exploration for PGM increased over the past three months, and a growing number of joint ventures have been signed in response to strong demand and high prices for these metals. A number of mining companies, anticipating growth in the PGM sector, have formed alliances with exploration companies with promising PGM properties. In Canada, Anglo American Platinum Corp. (Amplats), the world's largest PGM producer, formed a joint venture with Vancouver-based Pacific Northwest Capital Corp. (PNWC) which covers a number of PNWC properties in Ontario. The companies are investigating the potential of the River Valley mafic intrusion, located 60 kilometers northeast of Sudbury, for large-scale mineralization amenable to open-pit mining. Results from the first phase of a 13-hole drilling program reportedly intersected significant PGM values over substantial core lengths. The most northerly hole drilled intersected the longest mineralized section of the drill program, with an intercept of 130.5 meters (m) of 1.21 g/t PGM plus gold. Another joint venture in the River Valley area, adjacent to the Amplats/PNWC area, is between Impala Platinum Corp. (Implats), the world's second leading PGM producer, and Toronto-based Mustang Minerals Corp., where a second phase drilling program is in progress. Mustang is exploring at its East Bull Lake property, located about 80 km west of Sudbury. Mustang's license covers the East Bull Lake gabbroanorthosite intrusive complex, and includes a 30-km strike length of the prospective margin of the intrusion. Recent drilling results, reportedly indicate significant palladium, platinum, and rhodium mineralization (Mining Journal, 2000b).

Owing to expressed interest from a broad range of industrial sectors, including aircraft engine super-alloys, fuel cells, chemical catalysts, and electronic components, the price of ruthenium has increased from \$46 per troy ounce on December 29, 1999, to \$110 per troy ounce on April 28, 2000. Some traders are predicting that the price will go even higher based on the potential for increased demand for the metal (Metal Bulletin, 2000b).

On April 3, 2000 the Tokyo Commodity Exchange (TOCOM) removed restrictions on the February and April 2001 palladium contracts. Regular trade resumed from the morning position on that day. TOCOM lifted (1) a ban on speculative positions; trade was previously limited to hedge positions by commercial players and (2) extraordinary margin requirements. TOCOM imposed the restrictions in February 2000, ostensibly to stabilize the palladium futures market (Platt's Metals Week, 2000d).

#### **References Cited**

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- ——2000e, Western Areas, NUM strike deal: Platt's Metals Week, v. 71, no. 16, April 17, p. 8.

 ${\bf TABLE~1}$  MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

#### (Kilograms)

				Other	
Gold	Alaska	California	Nevada	States 2/	Total
1999: p/					
April	1,380	1,440	21,400	4,360 r/	28,600
May	1,340	1,460	21,700	4,170 r/	28,600
June	1,310	1,520	22,600	4,280 r/	29,700
July	1,390	1,420	20,100 r/	4,390 r/	27,300 r/
August	1,390	1,350	21,100	4,340 r/	28,100 r/
September	1,360	1,370	21,200 r/	4,310 r/	28,300
October	1,260	1,540	21,800 r/	4,440 r/	29,000 r/
November	1,180	1,640	22,200 r/	4,470 r/	29,500 r/
December	1,260	1,810	21,900 r/	4,620 r/	29,600 r/
January-December r/	15,700	17,500	262,000	51,500	347,000
2000:					
January r/	1,200	1,470	21,300	4,200	28,200
February r/	1,140	1,390	20,000	4,030	26,500
March r/	1,200	1,390	20,800	4,400	27,700
April	1,190	1,280	19,500	4,240	26,200
January-April	4,710	5,520	81,600	16,900	109,000
				Other	
Silver	Arizona	Idaho	Nevada	States 3/	Total
1999: p/					
April	16,500	34,400 r/	48,300 r/	68,500 r/	168,000
May	17,200	35,100 r/	44,700 r/	64,600 r/	162,000
June	16,200	34,400 r/	50,500 r/	66,500 r/	168,000
July	16,600	35,100 r/	39,000 r/	65,200 r/	156,000 r/
August	14,600	35,100 r/	39,300 r/	61,400 r/	150,000 r/
September	13,900	34,400 r/	47,600 r/	59,900 r/	156,000
October	13,500	35,100 r/	48,700 r/	63,500 r/	161,000 r/
November	12,100	34,400 r/	41,500 r/	61,500 r/	150,000 r
December	14,700	34,400 r/	75,100 r/	61,800 r/	187,000 r
January-December r/	183,000	416,000	597,000	763,000	19,600,000
2000:					
January	W	34,400	58,500 r/	75,200 r/	168,000 r
February	W	34,300	63,300 r/	69,900 r/	167,000 r
March	W	34,300	71,200 r/	75,000 r/	181,000 r
April		34,300	57,600	73,400	165,000
January-April	W	137,000	251,000	293,000	681,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data, included with "Other States."

<sup>1/</sup> Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2/</sup> Includes Arizona, Colorado, Idaho, Montana, New Mexico, South Carolina, South Dakota, Utah, and Washington.

<sup>3/</sup>Includes Alaska, California, Colorado, Missouri, Montana, New Mexico, New York, South Carolina, South Dakota, Tennessee, Utah, Washington, and States indicated by symbol W.

# TABLE 2 SELECTED PRECIOUS METAL PRICES

(Dollars per troy ounce)

	Gold	Silver	Platinum	Palladium
Engelhard Industries:				
1999:				
Low/date	253.88 (July 20)	4.91 (January 4, April 14,		
		May 28, and June 4)	344.00 (January 28)	293.00 (May 4)
High/date	326.70 (October 5)	5.75 (September 28)	457.00 (November 16)	456.00 (December 29)
Average	279.91	5.25	378.94	363.20
2000:				
March:				
Low/date	276.87/30	4.95/30	470.00/2 and 3	605.00/31
High/date	294.05/1	5.18/21	504.00/22	725.00/15
Average	287.53	5.10	483.74	679.39
April:				
Low/date	276.17/28	4.96/26 and 27	473.00/26	570.00/10, 11 and 13
High/date	283.63/11	5.18/13 and 18	527.00/5	610.00/5 and 28
Average	280.88	5.10	499.79	587.05
May:				
Low/date	272.41/26	4.95/30	504.00/8	571.00/30
High/date	281.88/5	5.16/4	567.00/24	630.00/1
Average	276.25	5.04	533.14	585.36
Year to date				
Low/date	272.41 (May 26)	4.95 (March 30 and May 30)	416.00 (January 6)	437.00 (January 6)
High/date	313.88 (February 7)	5.53 (February 7)	573.00 (February 17)	815.00 (February 22)
Average	286.17	5.15	495.98	589.37
Handy and Harman:				
1999	278.81	5.25	XX	XX
2000:				
March	286.39	5.10	XX	XX
April	279.75	5.10	XX	XX
May	275.10	5.05	XX	XX
Average year to date	285.02	5.16	XX	XX
London Final: 1/				
1999	278.77	5.22	XX	XX
2000:				
March	286.39	5.06	XX	XX
April	279.69	5.06	XX	XX
May	275.19	4.99	XX	XX
Average year to date	285.09	5.11	XX	XX
XX Not applicable				

XX Not applicable.

1/ Silver price reported as "London Spot/US Equiv."

Source: Platt's Metals Week.

## $\label{eq:table 3} \textbf{U.S. IMPORTS AND EXPORTS OF GOLD 1/}$

(Kilograms of gold content, unless otherwise specified)

	Ores and	Doré and	Refined	Ash and		Waste and scrap	Metal powder	Gold compounds
Period and country	concentrates 2/	precipitates	bullion 3/	residues	Total 4/	(gross weight)	(gross weight)	(gross weight)
Imports for consumption:								
1999	117	24,700 r	/ 196,000	133	221,000 r	/ 30,500	5,500	9,400
2000:								
January	1	1,770	15,200	(5/)	17,000	1,000	129	323
February	5	2,680	12,300		15,000	1,200	18	1,640
March:								
Brazil		135	3,250		3,390			134
Canada		100	9,960		10,100	630	571	
Chile		345	450		795			
Colombia		94	1,380		1,470			1,850
Dominican Republic			45		45	2,220		
France			133		133			
Mexico		476	111	1	589	220		
Nicaragua		104	59	1	163			
Peru		967	420		1,390	1		170
United Kingdom		7,740	4,940		12,700			
Uruguay			2,420		2,420			
Other	5	91	292		388	139	85	91
Total	5	10,000	23,500	2	33,500	3,210	656	2,240
Year to date	11	14,500	51,000	3	65,500	5,410	803	4,200
Exports:								
1999	117	87,300	435,000		523,000	40,000	270	561,000
2000:								
January	1	8,550	61,000		69,500	6,340	168	16,200
February	1	7,270	81,600		88,900	5,470	14	313,000
March:								
Belgium						129		
Canada		301	111		411	1,010	11	31,000
China	2				2			
Denmark								11,300
Germany			8		8	81	3	
Israel		(5/)	1		1			13,600
Japan		1			1		11	
Mexico			2,250		2,250		69	
Peru			386		386			
Singapore		1	(5/)		2			299
Sweden			3		3	101	2	
Switzerland		8,190	40,400		48,500		1	
United Kingdom			5,990		5,990	2,640	5	3
Other		(5/)	158		158	19	(5/)	5
Total	2	8,490	49,300		57,700	3,980	102	56,200
Year to date	4	24,300	192,000		216,000	15,800	283	386,000

r/ Revised. -- Zero.

<sup>1/</sup> Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2/</sup> Includes gold content of base metal ores, concentrates, and matte imported for refining.

<sup>3/</sup> Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

<sup>4/ &</sup>quot;Waste and scrap," "Metal powder," or "Gold compounds" not included in "Total."

<sup>5/</sup> Less than 1/2 unit.

## ${\bf TABLE~4} \\ {\bf U.S.~IMPORTS~AND~EXPORTS~OF~SILVER,~REFINED~AND~AS~NITRATE~1/}$

### (Kilograms)

Period and country	Bullion (silver content)	Doré (silver content)	Total (silver content)	Other unwrought silver (gross weight)	Metal powder (gross weight)	Silver nitrate (gross weight)
Imports for consumption:	(sirver content)	(sirver content)	(SHVCI COILCIL)	(gross weight)	(gross weight)	(gross weight)
1999	2,660,000	404,000	3,060,000	126,000	120,000	4,450
2000:		404,000	3,000,000	120,000	120,000	4,430
January	268,000	15,600	284,000	14,700	4,690	
February	1,010,000	15,400	1,020,000	997	8,060	2,030
March:		13,400	1,020,000	771	8,000	2,030
Canada	100,000 2	·/	100,000	6,850	18,100	36
Chile		6,060	6,060	0,850	10,100	30
France	_ =-	0,000	0,000		100 2	,
Germany					640	,
Japan					10,400	
	_	6 970 2	156,000	<del></del>	,	
Mexico Peru		6,870 2	/ 156,000 15,000	1,920	18,700	
United Kingdom	107,000		107,000		(3/)	
Other Total		12,900	384,000	8,780	48,000	
						36
Year to date	1,650,000	43,900	1,690,000	24,400	60,700	2,070
Exports:		£4.400	~ · ~ · · · · ·	<b>55</b> 400	240.000	
1999	481,000	64,400	545,000	75,100	318,000	62,500
2000:		2.450		4 400	4.7.000	40.500
January	56,900	3,450	60,300	4,690	15,900	18,500
February		8,340	10,100	2,230	37,100	6,580
March:	_			244		
Australia				244		
Canada	62		62	286	2,200	19,200
China						4,140
Colombia	152		152			
Dominican Republic				551		53
France				135	1,910	
Germany				1,190	6,680	4
Hong Kong				80	1,520	
India				145		
Ireland					1,200	
Israel					119	
Italy				9	64	
Japan	14,800		14,800		17,300	
Korea, Republic of				964	2,350	
Mexico	1,190	3,730	4,920	4,000	417	163
Netherlands					992	
Sweden					413	
Switzerland		666	666		24	
Taiwan				2,910	907	
Thailand	_			672		
United Kingdom	160	578	738		2,840	11
Other				52		
Total	16,400	4,980	21,400	11,200	39,000	23,500
Year to date	75,100	16,800	91,800	18,100	92,000	48,600

<sup>--</sup> Zero.

 $<sup>1/\,\</sup>mbox{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>2/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

<sup>3</sup>/ Less than 1/2 unit. All or part of these data have been referred to the Bureau of the Census for verification.

 ${\it TABLE~5} \\ {\it U.S.~IMPORTS~AND~EXPORTS~OF~SILVER, RAW, SEMIMANUFACTURED, AND~WASTE~AND~SCRAP~1/2} \\$ 

(Kilograms of silver content, unless otherwise specified)

Period and country Imports for consumption: 1999 2000: January	concentrates 10,800	concentrates	residues	Total	form 2/3/ (gross weight)	and scrap (gross weight)
1999 2000: January	10,800			10111	(gross weight)	(gross weight)
2000: January	10,000	2,750	101,000	115,000	139,000	1,640,000
January		2,730	101,000	113,000	137,000	1,010,000
	36		9,100	9,140	8,150	268,000
February	101		2,730	2,830	12,800	96,900
March:			2,730	2,030	12,000	70,700
Australia			219	219		
Canada			1,090	1,090	11,500	6,880 4
Dominican Republic						439
France					26	1,010
Germany					1,020	20,600 4
Ireland					-,	459
Israel					(5/)	4,000 4
Korea, Republic of					186	126
Mexico			293	293		152
Netherlands			2,3	2,3	(5/)	623
Switzerland					79	
Taiwan						100
United Kingdom			945	945	585 4/	38
Other					28 4/	67
Total			2,550	2,550	13,400	34,500
Year to date	138		14,400	14,500	34,300	400,000
Exports:	150		11,100	11,500	31,300	100,000
1999	70,800			70,800	122,000	1,310,000
2000:	70,000			70,000	122,000	1,510,000
January	8,040			8,040	27,500	95,200
February	17,000			17,000	10,000	181,000
March:	17,000			17,000	10,000	101,000
Argentina					111	
Belgium					341	16,000
Brazil					662	
Canada	411			411	4,610	78,400
China					22	18,900
France					853	
Germany					269	21,400
Hong Kong					141	512
India					60	
Ireland						400
Italy					94	3,160
Japan					306	12,100
Mexico					9,880	7,990
New Zealand					68	7,220
Singapore					256	
Spain					2,020	
Sweden					2,020	4,830
Taiwan					1,380	59
United Kingdom					833	914
Vietnam						224
Other					153	16
Total	411	<del></del>		411	22,100	165,000
Year to date	25,500			25,500	59,600	441,000

<sup>--</sup> Zero.

<sup>1/</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2/</sup> Containing 99.5% or more by weight of silver. Imports only.

<sup>3/</sup> Semimanufactured (including silver plated with gold or platinum) forms of silver.

<sup>4/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

<sup>5</sup>/ Less than 1/2 unit. All or part of these data have been referred to the Bureau of the Census for verification.

 ${\bf TABLE~6}$  U.S. IMPORTS FOR CONSUMPTION OF PLATINUM-GROUP METALS 1/

(Kilograms of metal content, unless otherwise specified)

	Platinum		Other		Platinum							
	grain and	Platinum	unwrought	Platinum,	waste and	Platinum	Unwrought	Palladium,		Unwrought	Unwrought	
Period and country	nuggets	sponge	platinum	other	scrap	coins	palladium	other	Iridium 2/	osmium	ruthenium	Rhodium 3/
1999	6,100	78,300	7,820	16,500	19,700	169	165,000	24,100	2,270	23	11,400	10,500
2000:	-											
January	252	3,010	115	382	9,190	1	5,350	11,600	766		1,450	5,490
February	222	8,900	123	474	280	9	14,100	280	88		2,010	529
March:	_											
Australia				4	7	(4/)						
Belgium		578					2,820					258
Brazil				33								
Canada	- 1			61	25		350	10	(4/)			
Chile				180								
China						(5/)	156					1
Colombia			23									
France									12		54	
Germany	67	285	24	271	245		320	382	16	6	311	15
Honduras							2					
Hong Kong	2				13							
Israel			37				2 6					
Italy		52		1			153	(5/)				
Japan	7			1			709	3			1	3
Lithuania					(4/)							
Mexico	9				13							
Netherlands				2								
Norway		31					172					
Peru					(4/)							
Philippines					6							
Poland			32									
Russia			15				8,950	2,030				6
Singapore					(4/)							
South Africa	- 1	4,310	31				2,010	47	75	17	702	6/ 424
Spain				34								
Switzerland			6	133			1 6	23				
Taiwan			1									
United Kingdom		295		14 6	1		247	20	62		55	9
Venezuela					7							
Total	87	5,550	168	734	315	(4/)	15,900	2,520	165	23	1,120	716
Year to date	561	17,500	406	1,590	9,780	11	35,400	14,400	1,020	23	4,580	6,730

<sup>--</sup> Zero.

<sup>1/</sup> Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2/</sup> Unwrought and other forms of iridium.

<sup>3/</sup> Unwrought and other forms of rhodium.

<sup>4/</sup> Less than 1/2 unit.

<sup>5/</sup> Less than 1/2 unit. All or part of these data have been referred to the Bureau of the Census for verification.

<sup>6/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

# $\label{eq:table 7} \text{U.s. EXPORTS OF PLATINUM GROUP METALS } 1/$

(Kilograms of metal content, unless otherwise specified)

			Platinum waste and	Iridium, osmium and	
Period and country	Palladium 2/	Platinum 2/	scrap	ruthenium 2/3/	Rhodium 2/
1999	43,900	19,400	7,660	851	114
2000:	<u> </u>				
January	4,800	6,350	771	106	171
February	4,280	1,400	349	121	42
March:					
Argentina		1			
Australia		8			(4/)
Belgium		3	1		
Brazil		81			
Canada	135	80	30	30	
Cayman Islands	 1				
Chile	<del></del>	(4/)			
China	200				
Costa Rica		3			
Cyprus				(4/)	
Denmark		3			
Finland	_ 1	5			
France	31	120			
Germany	520	142	56	1	6
Greece	_ 6				
Hong Kong	_	1			(4/)
Iceland	_ 2				(4/)
India		7			
Ireland	 	172		26	
Israel	356	(4/)			
Italy		38	2		
Japan		192	142	(4/)	
Korea, Republic of		3	(4/)	(4/)	
Kuwait	1		(4/)	<del></del>	
	$ \frac{1}{3}$		<del></del>	<del></del>	
Malaysia	_ 3	29			
Mexico					
Netherlands Netherlands		7			
Netherlands Antilles		2	11		
New Zealand	$ \frac{7}{2}$			1	
Norway	2				
Peru		1			
Philippines	6	3		<del></del>	
Singapore	_ 1	6			
Spain	12				
Sweden		8	1		
Switzerland	31	403			
Taiwan		99			
Thailand	_ 2	7			(4/)
Turkey	1			<del></del>	
United Kingdom	198	343	350	44	2
Venezuela					(4/)
Total		1,770	593	102	8
Year to date	12,100	9,520	1,710	329	222

<sup>--</sup> Zero.

 $<sup>1/\,\</sup>text{Data}$  are rounded to no more than three significant digits; may not add to totals shown.

<sup>2/</sup> Unwrought and other forms.

<sup>3/</sup> Gross weight.

<sup>4/</sup> Less than 1/2 unit.